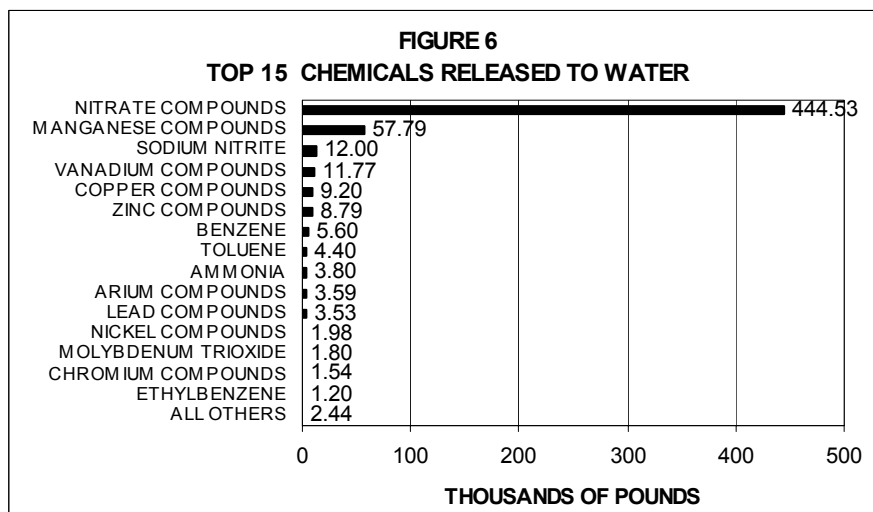
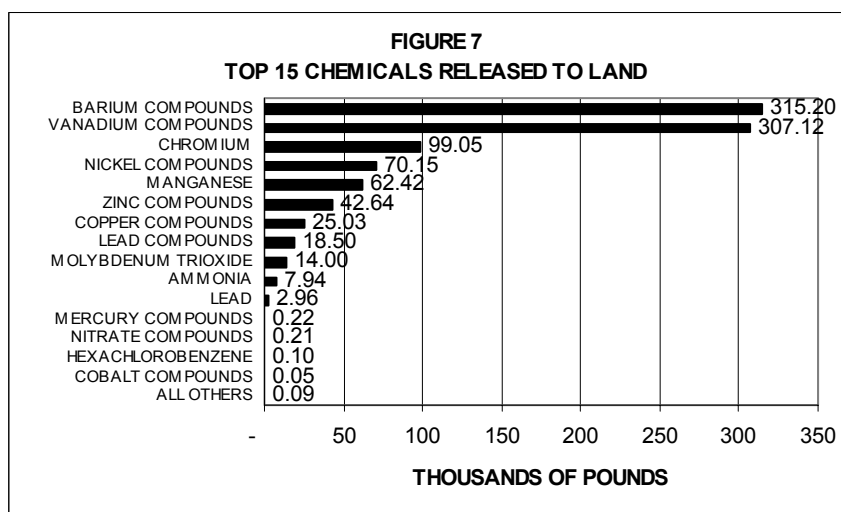


Figure 6 shows the relative relationship of the top 15 TRI chemicals and all other chemicals reported as released to water. This clearly shows the influence that nitrate and manganese compounds have on the total.



Releases to Land

Land releases, as shown in Figure 4 on page 11, are relatively small, comprising 12% of the total on-site releases. Figure 7 shows the relative contribution of the top 15 chemicals reported as being released to land. Nearly all the land releases are metals and metal compounds except for the small quantities of hexachlorobenzene and ammonia.



Most of the metals and metal compounds being reported are formed during the combustion process from metal impurities that exist in coal or crude oil. Barium and vanadium compounds comprise 64% of the total land releases. Land releases, generally the metallic compounds shown above, by the Indian River power plant and Motiva facilities account for 96% of the total land releases.

RELEASES FROM THE TOP 15 FACILITIES

FIGURE 8
2001 ON SITE RELEASES
TOP 15 FACILITIES

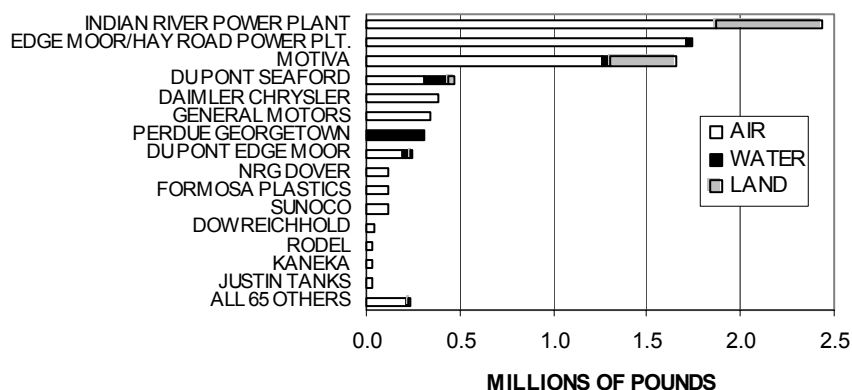


Figure 8 shows the relative contribution of each of the top 15 reporting facilities to on-site releases. The top 4 facilities are, or have as a significant portion of their facility, an energy generating operation. Of the 8,306,183 pounds released statewide by 80 facilities, the top 15 facilities accounted for 8,071,849 pounds, over 97% of the total on-site releases.

TABLE 8
TOP 15 FACILITIES 2000 AND 2001 RANKING BY ON SITE RELEASE
(in pounds)

2001 RANK	2000 RANK	FACILITY	2001			2001 TOTAL ON-SITE RELEASE	2000 TOTAL ON-SITE RELEASE	2000 TO 2001 CHANGE IN RELEASES
			TOTAL AIR	TOTAL WATER	TOTAL LAND			
1	1	INDIAN RIVER POWER PLANT	1,866,048	2,900	564,677	2,433,625	3,041,931	-20%
2	2	EDGE MOOR/HAY ROAD POWER PLT.	1,705,945	34,426	0	1,740,371	1,868,578	-7%
3	3	MOTIVA	1,256,410	47,528	351,170	1,655,108	1,755,756	-6%
4	4	DUPONT SEAFORD	306,281	136,338	26,071	468,690	801,279	-42%
5	5	DAIMLER CHRYSLER	384,450	0	0	384,450	483,604	-21%
6	7	GENERAL MOTORS	343,304	360	0	343,664	278,115	24%
7	6	PERDUE GEORGETOWN	0	310,000	210	310,210	327,018	-5%
8	8	DUPONT EDGE MOOR	195,808	37,153	12,033	244,994	228,588	7%
9	9	NRG DOVER	119,019	0	0	119,019	152,979	-22%
10	10	FORMOSA PLASTICS	116,616	0	0	116,616	134,526	-13%
11	17	SUNOCO	114,124	0	0	114,124	34,270	233%
12	13	DOW REICHOLD	43,565	0	0	43,565	39,611	10%
13	14	RODEL	33,867	0	0	33,867	37,426	-10%
14	15	KANEKA	32,428	1	0	32,429	35,450	-9%
15	16	JUSTIN TANKS	31,117	0	0	31,117	34,512	-10%
		ALL OTHERS IN STATE	217,598	5,231	11,505	234,334	556,308	-58%
TOP 15			6,548,982	568,706	954,161	8,071,849	9,253,643	-13%
STATE TOTALS			6,766,580	573,937	965,666	8,306,183	9,809,951	-15%

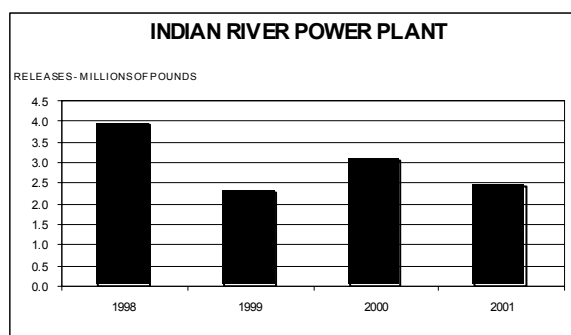
Source: 2001 DNREC TRI Database March 1, 2003

Table 8 shows the ranking of the top 15 facilities along with their 2000 ranking and the values of on-site releases for both years. The percent change in total on-site release from 2000 to 2001 is also shown. Releases to the environment as a result of remedial actions, accidents, or catastrophic events, or one-time events are not shown here, as these releases are generally not associated with changes in production. Changes in production may or may not affect releases from a facility due to other changes at the facility, such as changes in raw materials or processing methods, placing an idle process or equipment back into operation, or installation of new/improved production equipment possibly used to limit or eliminate releases of all or specific chemicals. Interested individuals are encouraged to contact facilities and inquire as to the reasons why changes occurred.

A brief description of each of the top 15 facilities is presented on the next several pages to provide an understanding of the use and importance of some of the TRI chemicals and basic operations at these facilities. The facility description describes the types of products manufactured at the facility and how their TRI chemicals relate to the products and the overall plant operation. The graph included with the facility description shows the trend of the facility total on-site releases since 1998, the date of the last major TRI reporting revision. Reporting revisions that have occurred since 1998 include the changes in reporting as described starting on page 3 with the threshold reductions for Persistent, Bioaccumulative Toxics (PBT's) and industry expansion. All newly reportable chemicals within this time period have been included. Please note that the scales on the graphs may be different, so comparisons must be made carefully. A complete list of 2001 release data grouped by facility and chemical is provided in Appendix C. Again, please contact a facility for additional details or to inquire about any changes in trends or unusual events.

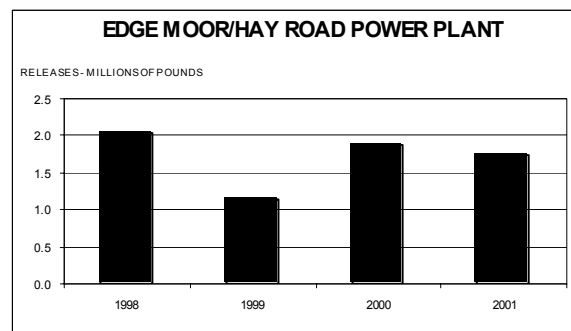
Rank #1 – NRG Indian River Power Plant - Oil- and coal-fired power plants were required to report under TRI for the first time for 1998. This facility, located near Millsboro, produces electricity, primarily from the combustion of coal.

The Indian River Plant reported on sixteen TRI chemicals for 2001. Nine of these were metal compounds, three were non-metallic PBT's, one was ammonia, and the remaining three were acid gases. All compounds except ammonia are formed during the combustion process as a result of impurities within the coal. Acid gas emissions - hydrochloric acid, hydrogen fluoride, and sulfuric acid - accounted for 76% of their on-site releases. The metal compounds are largely captured in the fly ash and bottom ash and sent to an on-site landfill. This accounted for 23% of their on-site releases. The facility had smaller amounts of copper compounds released to the Indian River, and the remainder of the on-site releases was ammonia and the non-metallic PBT's. On-site releases have decreased 38% since 1998.



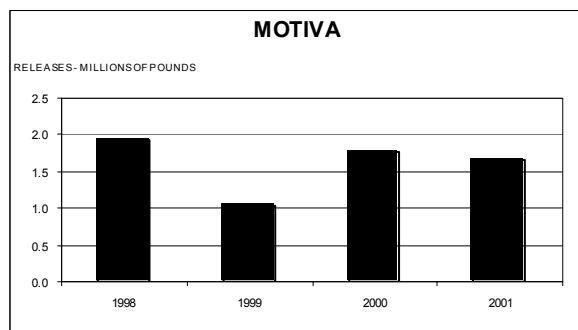
Rank #2 - Edge Moor/Hay Road Power Plant - Oil- and coal-fired power plants were required to report under TRI for the first time for 1998. This facility, located along the Delaware River a mile north of the Port of Wilmington, produces electricity from the combustion of coal, oil, and natural gas.

The Edge Moor Plant reported on sixteen TRI chemicals for 2001. This facility reported three acid gasses, nine metal compounds, three non-metallic PBT's, and ammonia. Acid gas emissions -- hydrochloric acid, hydrogen fluoride and sulfuric acid -- accounted for 95% of on-site releases. Releases of hydrochloric acid and hydrogen fluoride decreased from 2000, and sulfuric acid increased due to



changes in the amounts of oil and coal used. Ammonia is released in the power production process solely from the use of urea, a pollution control agent used for limiting the formation of oxides of nitrogen to the atmosphere. All listed compounds except ammonia are formed during the combustion process as a result of impurities within the fuel. Two-thirds of the metal compounds are largely captured in the fly ash and bottom ash. Generally, 100 percent of the captured ash is beneficially reused. It is used, for example, as an additive in concrete, as landfill stabilizer, as flowable fill in construction projects and as a base for road construction. The remaining third of ash not captured is equally released to air and water, accounting for 4% of their on-site releases.

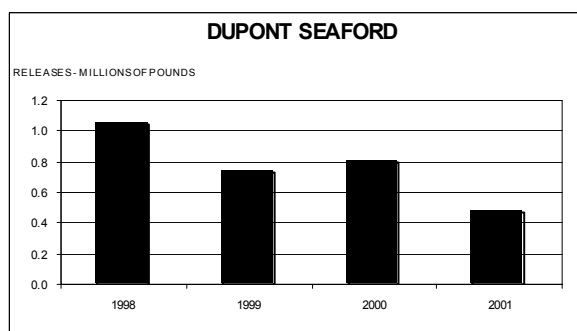
Rank #3 - Motiva Enterprises - The Motiva Refinery, located in the Delaware City industrial complex, refines crude oil into automobile gasoline, home heating oil, and a variety of other petroleum products. The facility, previously known as Star Enterprise, changed ownership to Motiva Enterprises on July 1, 1998. Motiva Enterprises, as of February 13, 2002, became a U.S. joint venture between Shell Oil Company and Saudi Refining, Inc.



Motiva reported on 43 TRI chemicals for 2001. Sulfuric acid and hydrochloric acid gas emissions accounted for over 60% of Motiva's on-site releases. Sulfuric and hydrochloric acids are formed as acid gasses in several units at the facility, including the Fluid Coker, Fluid Cat Cracker, and the on-site power plant that combusts oil and gas. Reported sulfuric and hydrochloric acid aerosol emissions increased substantially in 2001 from 2000 and 1999 levels due to a one-time catastrophic

event in 2001 involving a sulfuric acid tank explosion and fire, and improved estimating techniques for hydrochloric acid. These increases were offset by several other decreases, particularly that MTBE releases to air were reduced by 75% in 2001 after an unusual event in 2000 involving cleaning a storage tank.

Rank #4 - DuPont Seaford - This facility was the first plant worldwide to produce spun nylon fibers, beginning operations in 1939. The spun nylon is used in the apparel industry, in carpeting, and other fabrics applications. The facility also produces nylon flake for export.

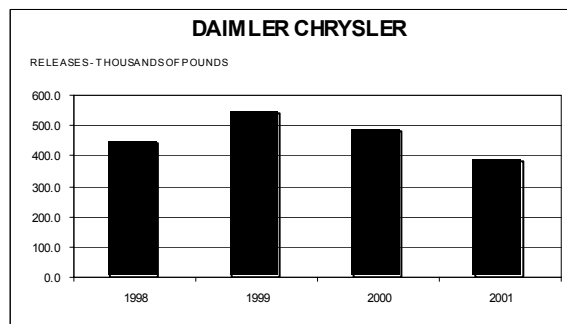


DuPont Seaford reported on twelve TRI chemicals for 2001. Almost 90% of their on-site releases were of three chemicals; hydrochloric and sulfuric acids to air and nitrate compounds to water. The acids are not directly used in the production of nylon, but rather are produced as results of the facility's support operations. Gaseous hydrochloric and sulfuric acids are released from the combustion of coal in their power plant. The coal contains small amounts of chlorine- and sulfur-containing compounds that, through the combustion

process, convert to acid gases. Nitrate compounds are formed as a by-product of their on-site wastewater treatment plant. This facility has reduced its on-site releases by 50% since 1998.

Rank #5 - Daimler Chrysler Newark Assembly Plant - Daimler Chrysler assembles the Dodge Durango SUV for distribution to dealers.

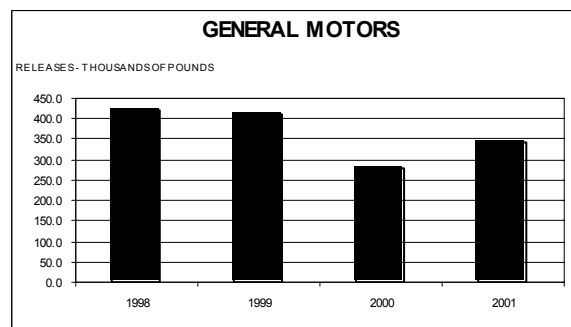
Daimler Chrysler reported on eighteen TRI chemicals for 2001. All on-site releases were to the air. Many of these are solvents used in paints or for parts cleaning, while others are materials that are incorporated into the cars themselves, such as ethylene glycol (antifreeze) and methyl tert-butyl ether (gasoline additive). The vehicle body coating process makes use of certain glycol ethers, 1,2,4-trimethylbenzene, methyl isobutyl ketone, n-butyl alcohol, and xylene. These materials are also used elsewhere in the plant. In total they account for approximately 93% of the Daimler Chrysler on-site releases for 2001.



This facility has reduced its emissions of on-site TRI reportable chemicals by nearly 30% since the 1999 reporting year, and has implemented reductions in off-site transfers and on-site waste management volumes as well.

Rank #6 - General Motors Wilmington Assembly Plant - General Motors assembles Saturn automobiles for distribution to dealers.

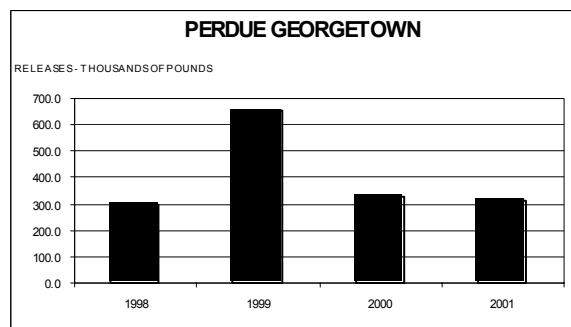
GM reported on fifteen TRI chemicals for 2001. Many of these are solvents used in paints or for parts cleaning, while others are materials that are incorporated into the cars themselves, such as ethylene glycol (antifreeze) in the radiator. Almost all on-site releases reported by GM were to the air. Xylene, 1,2,4-trimethylbenzene, and glycol ethers, paint solvents used in both the base and top coats, accounted for three quarters of their on-site releases for 2001.



Although this facility reported an increase in emissions of on-site TRI reportable chemicals in 2001, it has reduced its emissions of TRI chemicals by 17% since the 1999 reporting year while increasing production by 23 percent.

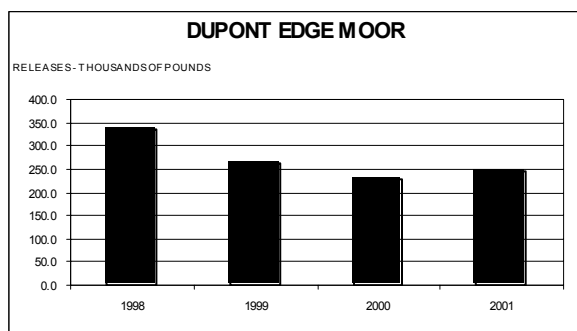
Rank #7- Perdue Farms - Perdue Farms is a producer of poultry products. This Georgetown facility processes chickens for sale to the retail market.

Perdue reported on two TRI chemicals for 2001. The majority of the releases were for nitrate compounds. Nitrate compounds are formed as a result of their waste treatment operations, where ammonia and production waste from the poultry processing plant's



wastewater is digested and converted to nitrates. Nitrate volume at Perdue's wastewater treatment plant peaked in 1999 when new government-mandated processing plant procedures dramatically increased the amount of water required to process chickens. However, over the past two years, improvements in the wastewater treatment plant have cut nitrate releases by more than 50 percent, bringing them close to pre-1999 levels despite higher volumes of wastewater.

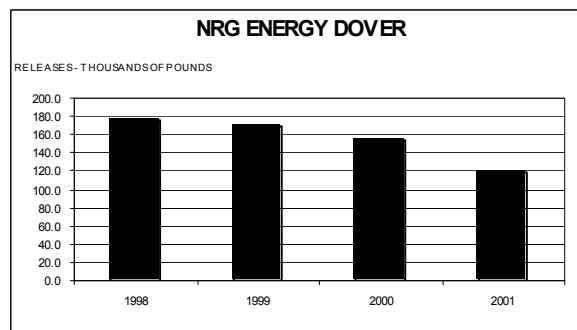
Rank #8 - DuPont Edge Moor - The Edge Moor Plant is one of four domestic DuPont facilities that manufactures titanium dioxide, a white pigment that is used in food-grade markets and in the paint, coatings, plastic, and paper industries. This facility exclusively serves the paper industry. The plant is located along the Delaware River a few miles north of the Port of Wilmington.



DuPont Edge Moor reported on twenty TRI chemicals for 2001. Carbonyl sulfide accounted for 78% of their on-site releases. Carbonyl sulfide is a by-product produced from the use of sulfur-bearing coke in the process of manufacturing the titanium dioxide from titanium-rich ores.

Also as a result of ore processing, dioxins and dioxin-like compounds are created, and well over 99% is contained within the solid material sent to an off-site landfill facility.

Rank #9 - NRG Dover Plant - Oil- and coal-fired power plants were required to report under TRI for the first time for 1998. This facility located on the West side of Dover produces electricity, primarily from the combustion of coal.

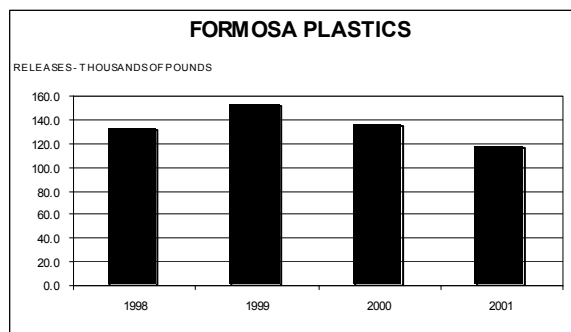


The NRG Dover Plant reported on six TRI chemicals for 2001. Two of these were acid gases formed during the combustion process. Acid gas emissions - hydrochloric acid and sulfuric acid - accounted for over 99% of their on-site releases. The metal compounds formed as a result of impurities in the coal are largely captured in the fly ash and bottom ash and sent to an off-site landfill.

Rank #10 - Formosa Plastics - Formosa Plastics, located in the Delaware City complex, produces polyvinyl chloride (PVC) resin for bulk sale to other industries that produce PVC based products, such as containers, flooring, carpet backing, upholstery, toys, and gloves.

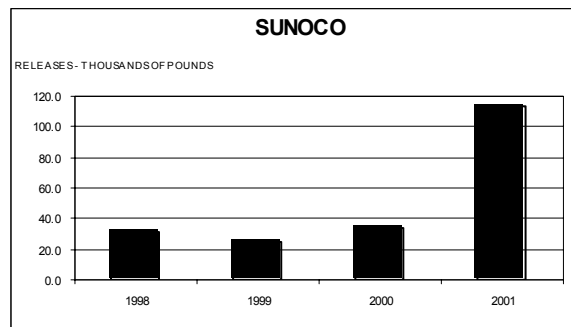
Formosa reported four TRI chemicals for 2001. Vinyl chloride monomer (VCM) accounted for 84% of their on-site releases. VCM is the primary ingredient for producing PVC and is released as residual unreacted monomer during the drying process of the PVC resin. Permits regulate the concentration of the residual monomer in the PVC before drying. Vinyl acetate

accounted for 10% of Formosa's on site releases. Vinyl acetate is also a raw material used in certain products and is released through the drying process. Ammonia accounted for 6% of Formosa's on site releases and again is used in several of Formosa's products and is released during the drying process. Formosa also reported a small amount of dioxin and dioxin-like compounds for both on-site releases and off-site transfers. Formosa Plastics also is currently investing funds in a process modification, which when complete should reduce vinyl chloride emissions significantly, although the site currently operates below permitted emission levels. Formosa has reduced on-site releases by 23% since 1999.



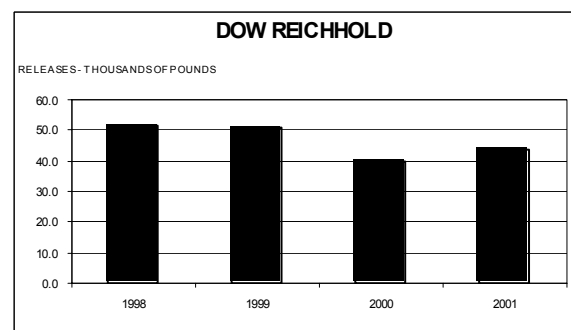
Rank #11 – Sunoco Refining and Marketing – Sunoco, located in Marcus Hook, PA extends its facility into the North Claymont area of Delaware. The Marcus Hook facility can process 175,000 barrels a day of crude oil into fuels – including gasoline, aviation fuel, kerosene, heating oil, residual fuel, propane and butane, and petrochemicals. The major petrochemicals are benzene, toluene, xylene, cyclohexane, propylene, ethylene, and ethylene oxide; these are sold to chemical companies, which use them to make a variety of other products.

The entire facility reported twenty-nine TRI chemicals. The portion of the facility in Delaware reported five TRI chemicals in 2001. Toluene, xylene, and ethylene account for 83% of the total Delaware releases. Xylene, benzene, and toluene were reported for the first time in Delaware in 2001 and were releases to air from tanks. Ethylene and ethylene oxide, reported for several years in Delaware, have not changed significantly.



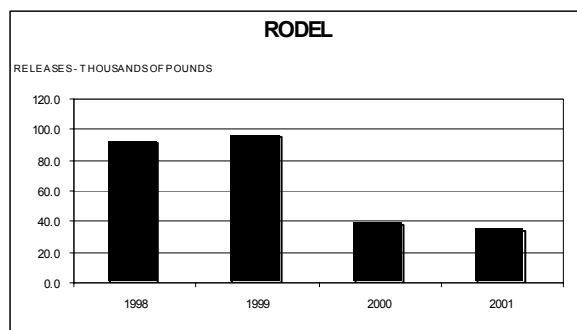
Rank #12 - Dow Reichhold – Reichhold is located two miles south of Cheswold. Reichhold produces emulsion polymers, sometimes referred to as latex. These products, which are sold in bulk liquid form, are used in the manufacture of paper, carpets, textiles, high performance gloves, coatings, and adhesives.

Reichhold reported on twelve TRI chemicals in 2001. Most of these are raw materials used to form the emulsion polymers. Residual monomers are processed in pollution control equipment that achieves 98.0-99.9% efficiency before being released to the air. Almost half of their on-site releases were attributable to 1,3-butadiene.



Metachem – Metachem, located in the Delaware city complex, was a producer of chlorinated benzene compounds. This facility closed in May, 2002 and failed to file a TRI report for 2001. Had this facility reported the same amounts released in 2001 as it reported in 2000, it would have ranked 12th. Metachem reported on 12 chemicals in 2000.

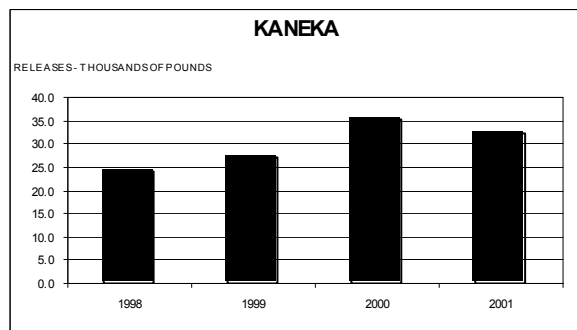
Rank #13 - Rodel - Rodel manufactures polishing pads and slurries for the semiconductor, electronics, and glass industries. Rodel is located south of Newark in the Diamond State Industrial Park.



solvent carrier in the Impregnation Process. Releases are primarily stack emissions to air from the oxidizer used to control process emissions.

Rodel reported on four TRI chemicals for 2001. N,N-Dimethylformamide (DMF), used as a solvent carrier in the polishing pad manufacturing process, accounted for 71% of their on-site releases. Releases of DMF mostly occur through evaporation from the poromerics coating and washing process. The majority of the DMF used is recycled in their distillation equipment for reuse in the process. The 2001 DMF release was 43% of the 1999 level. Methyl ethyl ketone (MEK) accounted for 29% of their on-site releases and is used as a

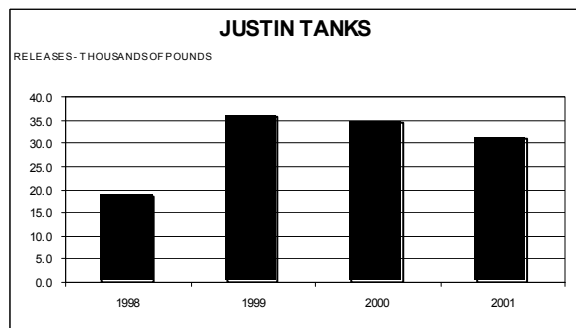
Rank #14 – Kaneka Delaware – Kaneka, located in the Delaware City complex, manufactures Poly Vinyl Chloride (PVC) powder for use in PVC based applications such as inflatable balls, covers, foam carper backing, and similar products.



chloride monomer in the PVC before drying. Although down by 9% in 2001 and operating below permit limits, Kaneka's on-site releases increased by 34% since 1998.

Kaneka reported two TRI chemicals released in 2001; vinyl chloride and hydrochloric acid. Vinyl chloride represented 99% of the Kaneka on-site releases for 2001. Vinyl chloride was released during the drying operations, where unreacted residual vinyl chloride monomer was removed from the finished powder. Permits regulate the concentration of the residual vinyl

Rank #15 - Justin Tanks – Justin tanks, located in Georgetown, manufactures a wide variety of Fiberglass Reinforced Plastic (FRP) tanks for use in the chemical, agricultural, and food industries.



Justin reported on one TRI chemical, styrene, for 2001. Styrene is used as a monomer in the polymerization of fiberglass resin. The majority of the styrene remains in the resin during the polymerization process, with a small amount being released to the air during the curing process.